

Appln No. 09/825,638

Amdt date September 19, 2005

Reply to Office action of July 22, 2005

REMARKS/ARGUMENTS

Claims 1 - 10 were in the application when last examined, of which, Claims 1 and 6 are independent. None of the claims are amended or canceled and no new claims are added.

The Examiner continues to reject Claims 1 - 10 under 35 U.S.C. §102(e) as being anticipated by Conroy (U.S. Patent 6,459,684). The Applicants restate the previous argument and present additional arguments.

The Applicants' Claim 1 calls for (underlining for emphasis) "A method of noise reduction ... comprising locating a blocking switch in the transceiver transmit path, the blocking switch allowing transmit signal propagation when enabled while preventing both transmit signal propagation and circuit device noise coupling from the transceiver transmit path to the transceiver receive path when the blocking switch is disabled; and disabling the blocking switch when the transceiver transmit path is not transmitting frames over the frame-based communications network."

First, echo cancellation and noise reduction are distinct and the specification of the Application clearly sets them apart: "VGA 470 [this statement is equally applicable to VGA 490] has two pairs of inputs, one fed back from the transmitter, the other a receive input from line 106. Any signal coming out of the transmitter causes a self-echo path (e.g., through the transformer depicted in Fig. 12) into the receiver that should be suppressed Noise also can get injected into the receiver from the transmitting side, even during times when there is no transmitting, since the electronics components in

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the transmitting path can contribute noise, even when idle." (Specification, page 18, lines 3 - 12, see also page 17, lines 20 - 25). While the specification of the Application includes both echo cancellation and noise reduction as two distinct functions, Claim 1 is directed to noise reduction.

Conroy, on the other hand, is clearly directed to echo cancellation. References to echo cancellation abound in the specification of Conroy starting from the first paragraph of the Background section, repeating throughout the specification, and concluding right before the Claims. (See, e.g., Conroy, column 1, lines 9 - 20, column 4, lines 1 - 6, column 8, lines 1 - 67, column 9, lines 50 - 55). As figure 6A of Conroy shows and its specification describes, an echo cancellation signal is derived from the signal being transmitted for the purpose of canceling out leakage of the transmitted signal into the received signal path. (Conroy, column 8, lines 1 - 5). This leakage is modeled digitally and an echo cancellation processor inputs the output code and generates an echo cancellation signal designed to cancel out the leakage of the transmitted signal to the received line. (Conroy, column 8, lines 15 - 18). The echo cancellation signal is added to the receive signal and the resulting signal is input to a receiver. (Conroy, column 8, lines 50 - 54).

Accordingly, the Applicants submit that Claim 1 is distinguished from Conroy because it is drawn to "a method of noise reduction" while Conroy is directed to echo cancellation alone.

Second, in Claim 1, the blocking switch prevents "transmit signal propagation" while in Conroy, the transmit signal is

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merely directed to an alternate path without being blocked. The Examiner has disagreed with this line of reasoning by referring to figure 6B of Conroy. According to the Examiner, figure 6B shows that initially both switches 602 and 604 of figure 6A are disabled hence preventing both transmit signal propagation and circuit device noise coupling. The Examiner refers to column 8, lines 55-65 of Conroy for further support. The Applicants respectfully disagree. Figure 6B starts from where DAC_{TX} begins and the extension of signal lines before DAC_{TX} are there merely to provide a frame of reference. Further, column 8, lines 55 - 65 that explain figure 6B do not support Examiner's contention. These lines explain the time division multiplexing function of the two switches of figure 6A of Conroy stating, for example, that "output 650 of DAC 601 alternates between values that correspond to the signal being transmitted and the echo cancellation signal." The situations when "signal 652 is high" and when "signal 654 is high" are both explained but there is no mention of when both signals are low. Also, the function of the two switches 602 and 604 of figure 6A of Conroy is to time divide multiplex the signal from DAC 601 to get a data signal for transmission over the transmit line and an echo cancellation signal for feedback to the receive line. Time division multiplexing is not blocking and an additional blocking function is not shown or described for the switches of Conroy.

Accordingly, the Applicants submit that Claim 1 is distinguished from Conroy because the blocking switch of Claim 1 is for "preventing ... transmit signal propagation" while the two switches of Conroy merely send the transmit signal down one

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path or the other never blocking it or preventing it from propagation.

Third, Claim 1 calls for (underlining for emphasis) "disabling the blocking switch when the transceiver transmit path is not transmitting." Conroy's switches must do their echo cancellation during transmission and that is why they share the transmission signal through time division multiplexing. Without transmission, there is no echo and no need for echo cancellation.

Accordingly, the Applicants submit that Claim 1 does its noise reduction when the transmit path is not transmitting while Conroy does its echo cancellation while signal transmission is in progress.

The limitations of Claim 1 are, therefore, not described or taught by Conroy. Moreover, Conroy does not suggest Claim 1 because Claim 1 is directed to noise reduction and Conroy to echo cancellation when the specification of the Application has made a clear distinction between the two.

Therefore, the Applicants submit that Claim 1 is not anticipated by Conroy under 35 U.S.C. §102(e). Claims 2 - 5 are dependent on Claim 1. As such, these claims are believed allowable based upon Claim 1.

Claims 6 - 10 are rejected under 35 U.S.C. §102(e) for reasons similar to those cited in rejection of Claims 1 - 5. These claims are distinguished from Conroy for reasons similar to those cited for Claims 1 - 5. As such, these claims are also believed allowable.

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Accordingly, in view of the above remarks it is submitted that the claims are patentably distinct over the cited reference and that the rejections to the claims have been overcome. Reconsideration of the above Application and allowance of pending claims 1 - 10 are respectfully requested.

Respectfully submitted,

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